

THE FAMILY DISCOZERCONIDAE (ACARINA, MESOSTIGMATA) IN AUSTRALIA.

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(Plate xii; five Text-figures.)

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Synopsis.

Discozercon derricki, n. sp., is described from a centipede, *Scolopendra* sp., in south Queensland, being the first record of the family Discozerconidae from Australia.

The bizarre mite family Discozerconidae Berlese, 1910 comprises two species. *Discozercon mirabilis* Berlese, 1910 was taken from the centipede *Scolopendra subspinipes* in Java, and *Discomegistus pectinatus* Trägårdh, 1911 from the millipede *Rhombcephalus giganteus* in Trinidad. A second species of *Discozercon* from an Australian scolopendrine centipede, which I am pleased to name for its collector, is described below.

DISCOZERCON DERRICKI, n. sp.

Types: Holotype male in the Queensland Museum, allotype female in the Queensland Institute of Medical Research, one paratype male in the United States National Museum, and one in the British Museum (Natural History); all collected from *Scolopendra* sp., Mount Tamborine, South-East Queensland, 24.ii.54, E. H. Derrick.

Male (Text-fig. 1 and Plate xii, above).

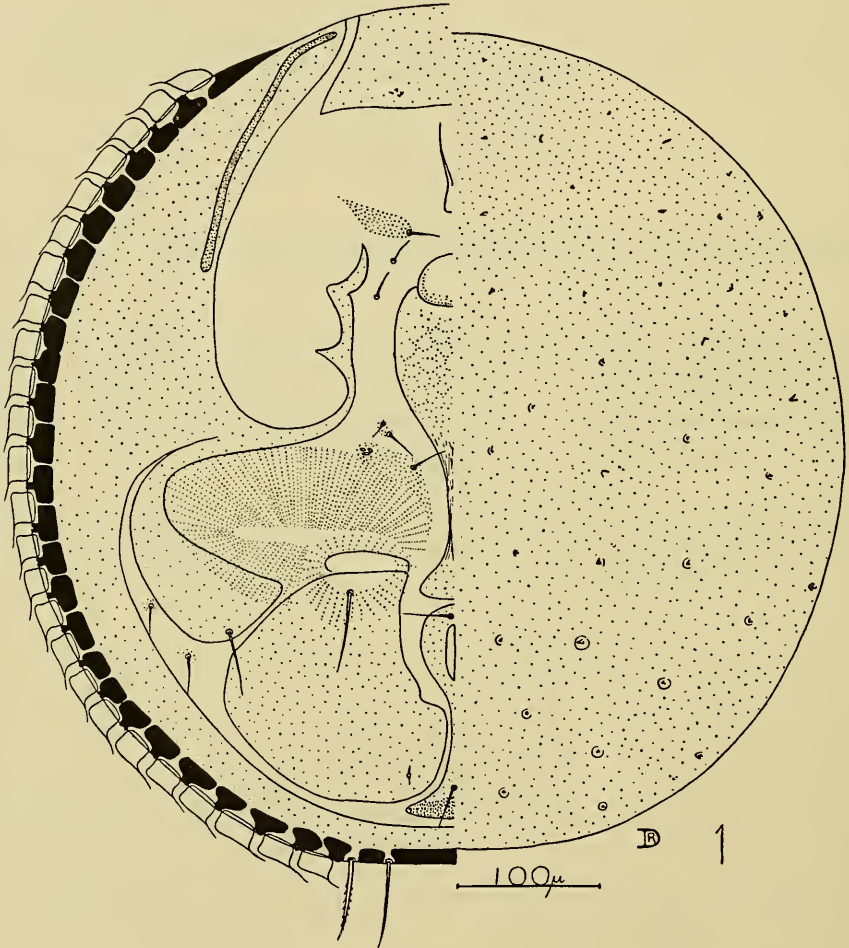
A brown, well-sclerotized species, with venter flat, and dorsum slightly arched; idiosoma sub-circular, length (excluding setae) 630 μ , breadth 608 μ . Dorsum almost entirely covered by single sub-circular shield, without setae, but with numerous conspicuous pores; surface covered by faint and finely reticulated markings. Margin with 23 to 26 pairs of greatly flattened setae, with flagellum arising from outer posterior corner. These setae are set in strongly sclerotized outer edge of ventral peripheral shield, which carries simple peritremes, and extends inwardly to form endopodal plates. Extreme posterior of body with two pairs of normal setae, of which the outer pair are finely ciliated. Infra-vertical shield trapezoidal, with posterior margin longest; with two small groups of pores posteriorly.

Tritosternum normal, with two slender and finely ciliated laciniae. Sternal setae I placed on weakly sclerotized jugular shields; sternal setae II and III free in sternal cuticle. Genital aperture covered by transversely oval operculum very similar to that of *Discomegistus*. Genito-ventral shield "figure of eight" shaped, with anterior half larger than posterior, and with reticulate markings; median strip striate. No setae are present on genito-ventral shield. Anal shield similar in shape to ventral shield, with anus longitudinally placed in anterior half of shield. Two adanal setae very close together in front of anus; postanal seta in posterior half of shield, set in front of zone of fine barbules.

With large transversely oval sucker (Plate xii, below) on either side of ventral shield, flanked laterally by crescentic shield and three setae, and posteriorly by larger

shield fitting between posterior margin of crescentic shield and anal shield. These larger shields have a single seta anteriorly, and a small pore in inner posterior corner. Between the suckers and the genito-ventral shield is a slightly sclerotized area with three setae and a small group of pores, which possibly represent the metasternal-genital complex.

Gnathosoma deeply set behind infra-vertical shield, so that only terminal segments of palpi project beyond outline of idiosoma; with tendency to fold inwards over sternal area. Palpi normal, with tarsus set on inner distal corner of tibia, and only half as



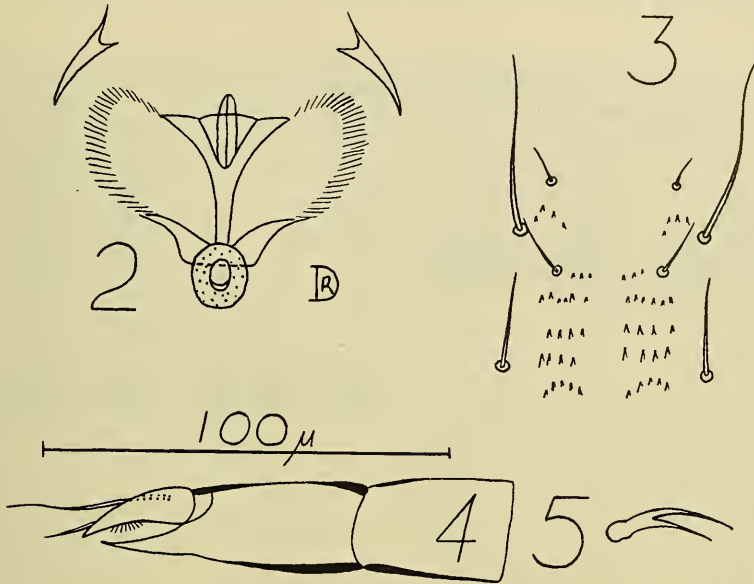
Text-fig. 1.—*Discozercon derricki*, n. sp. Male. Venter on left, dorsum on right.

thick as tibia. Sensory seta on palpal tarsus as long as tarsus, and two-tined (Text-fig. 5). Ventral surface of gnathosoma spinose; hypostomal setae as follows—I of medium length, II shorter, III very long, IV minute (Text-fig. 3). Chelicerae (Text-fig. 4) with two-segmented shaft. Fixed finger small and simple. Movable finger with line of small hairs on inner margin of blade as in *Discomegistus*; with spermatophore carrier comprising two flagelliform processes. At least two very frail and non-sclerotized processes are present near the fingers, but are not illustrated to avoid obscuring the main structure. Similar processes are described by Trägårdh (1911) for *Discomegistus*.

Legs directed forward; I largest, with strong setation, especially on femur; II to IV smaller, with weak setation. All tarsi with well-developed ambulacra, but without distinct claws; tarsi I with slender, articulated telotarsus as in *Discomegistus*.

Female.

As in male, except that no shield covers genital aperture, which contains a strongly sclerotized structure (Text-fig. 2). Ovum single and broadly oval. The chelicerae are lacking.



Text-figs. 2 to 5.—*Discozercon derricki*, n. sp. 2, Sclerotized structure in female genitalia; 3, Hypostomal setae; 4, Male chelicera; 5, Sensory seta on palpal tarsus.

Distribution.

Known only from the type host and locality in South-East Queensland.

Remarks.

The new species has been described in detail, partly to supplement Berlese's rather meagre description of the genotype, and partly to show the close relationship between *Discozercon* and *Discomegistus*. *D. derricki*, n. sp., may be readily separated from the genotype by the following characters—the number and shape of the marginal setae, the number of terminal idiosomal setae, and the shape of the genito-ventral and anal shields.

There has been some confusion over the familial classification of certain 'related' genera of myriapodophilous mites. The two groups in question are as follows:

- I. *Heterozercon* Berlese, 1888; *Atacoseius* Berlese, 1905; *Allozercon* Vitzthum, 1926.
- II. *Discozercon* Berlese, 1910; *Discomegistus* Trägårdh, 1911.

Berlese (1892) erected the family Heterozerconidae for *Heterozercon*, and later (1910) also referred *Discozercon* Berlese, 1910 to this family, but chose to rename it Discozerconidae. Not having seen Berlese's original papers, Baker and Wharton (1952) regarded the above five genera as comprising a single family—for which they used Berlese's Discozerconidae—because all have ventral suckers. However, as the suckers (the only real similarity) are basically different in structure in the two groups, and appear to have arisen independently, I prefer to use the familial classification of Vitzthum (1942) and Radford (1950), namely, Heterozerconidae Berlese, 1892 for Group I, and Discozerconidae Berlese, 1910 for Group II. Trägårdh (1911) gives the most satisfactory account of the relationships of these two families.

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EXPLANATION OF PLATE XII.

Discozercon derricki, n. sp.Above—Venter of male, $\times 118$. Below—Ventral sucker, $\times 240$.